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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,822	04/02/2004	Parthasarathy Sampath	9-2993-519US	8886
32292	7590	02/17/2006	EXAMINER	
OGILVY RENAULT LLP (PWC) 1981 MCGILL COLLEGE AVENUE SUITE 1600 MONTREAL, QC H3A 2Y3 CANADA			RODRIGUEZ, WILLIAM H	
			ART UNIT	PAPER NUMBER
			3746	

DATE MAILED: 02/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/815,822

Applicant(s)

SAMPATH ET AL.

Examiner

William H. Rodriguez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,2,9,12-15,19 and 20 is/are rejected.
- 7) ☒ Claim(s) 3-8,10,11 and 16-18 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/2/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/26/04</u> . | 6) <input type="checkbox"/> Other: ____. |

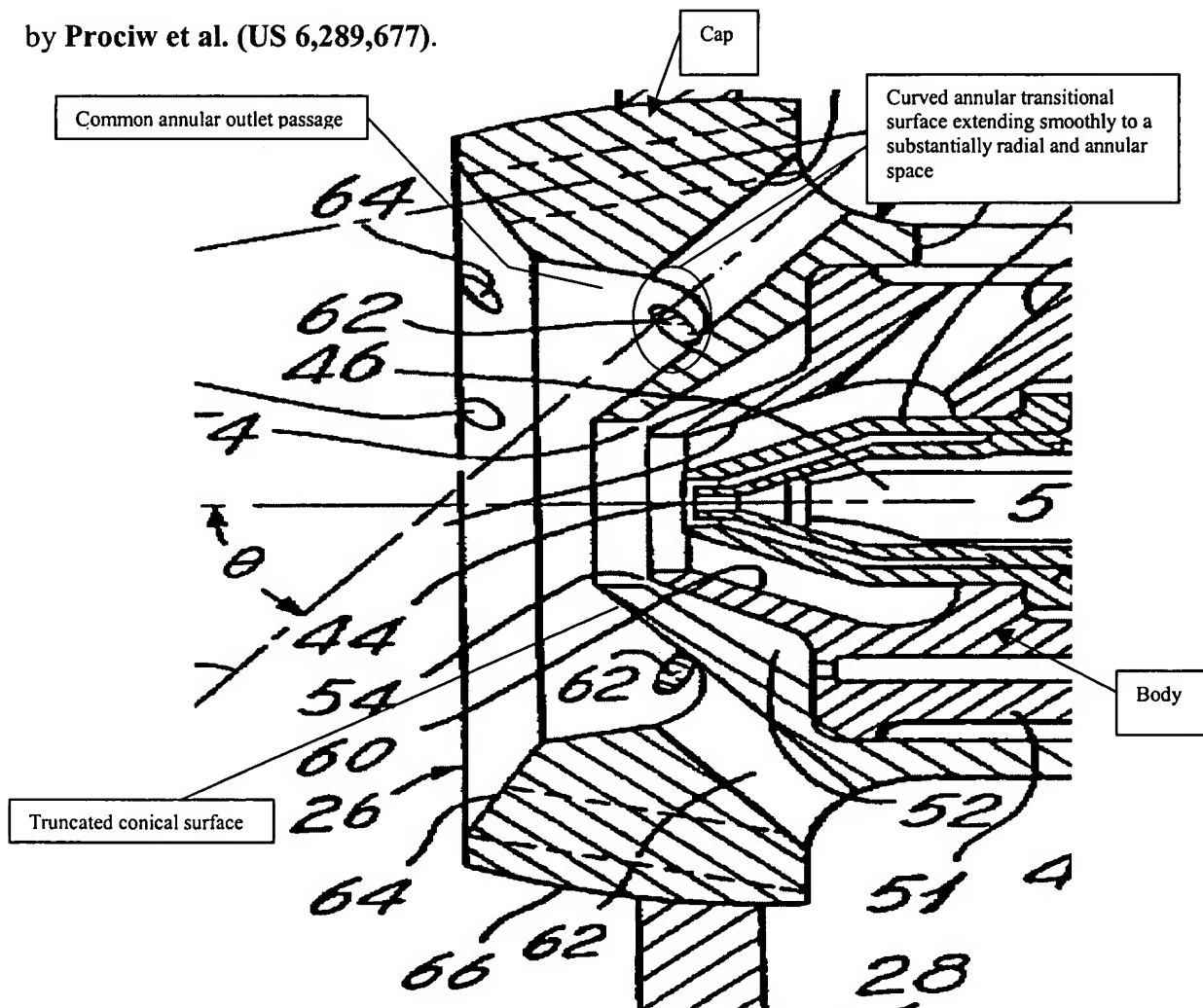
DETAILED ACTION***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 9, 12-15, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Prociw et al. (US 6,289,677).



With respect to claim 1, **Prociw** teaches a gas turbine fuel nozzle head, comprising: a central fuel discharging orifice 44; a first annular array of air discharging orifices 62 surrounding the central fuel discharging orifice 44 and communicating with an air source; and a common annular outlet passage communicating with the first annular array of air discharging orifices 62, the common annular outlet passage having a curved annular transitional surface extending smoothly to a substantially radial and annular surface relative to a central axis of the fuel nozzle head for directing a first portion of a mixing air flow (air from orifices 62) at a fuel flow exiting the fuel discharging orifice 44. See particularly Figures 2-4.

With respect to claim 2, **Prociw** teaches that the common annular outlet passage comprises a truncated conical surface smoothly connected to the curved annular transitional surface and extending inwardly for directing a second portion of the mixing air flow (air coming out of orifice 60) toward the fuel flow exiting the fuel discharging orifice 44. See particularly Figure 3.

With respect to claim 9, **Prociw** teaches that the nozzle head comprises a plurality of pieces, and wherein said plurality includes a body and a cap co-operating to at least partially define the common outlet passage. See particularly Figure 3 above.

With respect to claim 12, **Prociw** teaches a gas turbine fuel nozzle head, comprising: a central fuel discharging orifice 44; a first annular array of air discharging orifices 62 surrounding the central fuel discharging orifice 44 and communicating with an air source; a common annular outlet passage communicating with the first annular array of air discharging orifices 62, the common annular outlet passage having a substantially radial and annular surface relative to a central axis of the fuel nozzle head for directing a first portion of a mixing air flow (air coming

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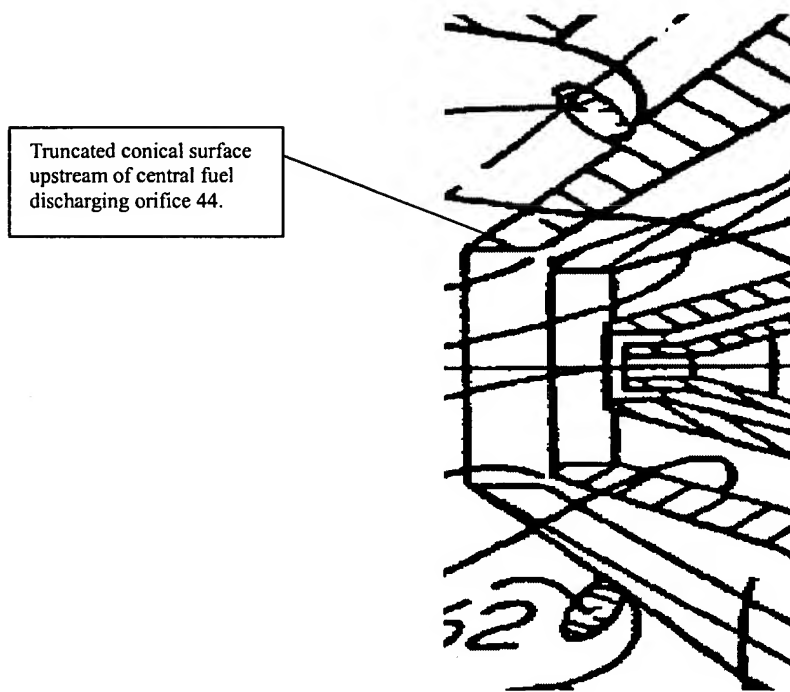
out of orifices 62) substantially perpendicularly towards a fuel flow exiting the fuel discharging orifice 44; and a second annular array of air discharging orifices 64 surrounding the common annular outlet passage and communicating with the air source for directing a guiding air flow angularly towards a mixed fuel/air flow. See particularly Figures 2-4.

With respect to claim 13, **Prociw** teaches that the gas turbine fuel nozzle head further comprises an end defining a substantially radial and external surface round a central orifice (the orifice of nozzle 54) therein, the central orifice communicating with the common annular outlet passage and the central fuel discharging orifice 44 for discharging the mixed fuel/air flow. See particularly Figure 3 above.

With respect to claim 14, **Prociw** teaches that the substantially radial and annular surface of the common annular outlet passage extends inwardly and terminates at the central orifice (the orifice of nozzle 54) of the fuel nozzle head, the central orifice having a diameter greater than a diameter of the central fuel discharging orifice 44. See particularly Figure 3 above.

With respect to claim 15, **Prociw** teaches that the common annular outlet passage comprises a truncated conical surface for directing a second portion of the mixing air flow angularly towards the fuel flow exiting the central fuel discharging orifice 44, the truncated conical surface being disposed upstream of the substantially radial and annular surface of the common annular outlet passage with respect to the fuel flow. See Figure below.

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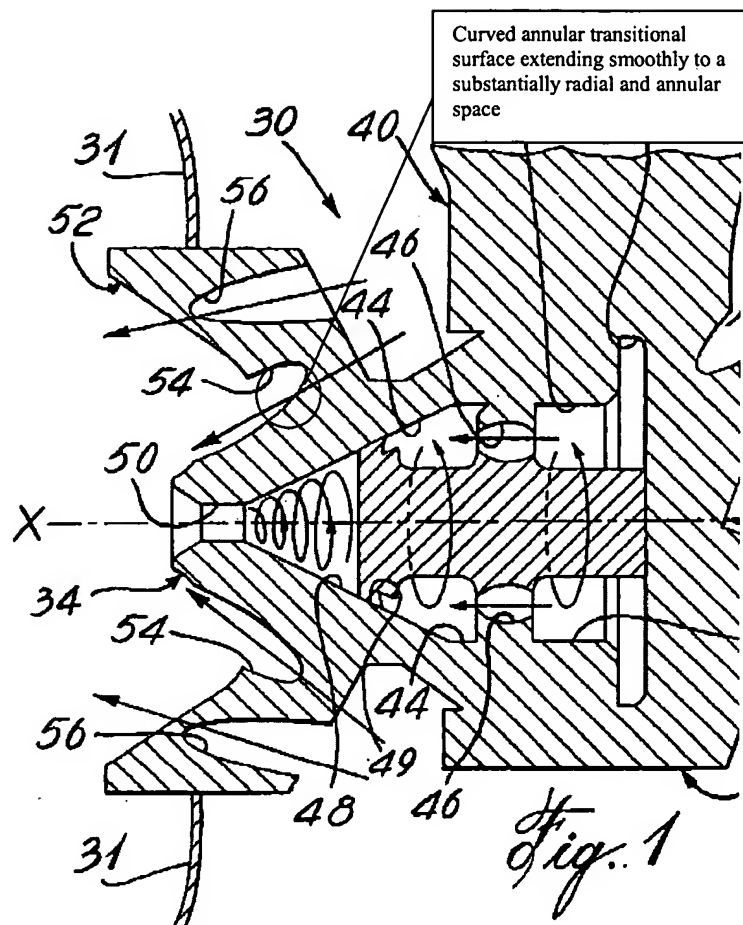


With respect to claim 19, **Prociw** teaches that the fuel nozzle head further comprises a central air passage 60 communicating with the air source and the central fuel discharging orifice 44, an annular fuel discharging passage 54 being disposed around and communicating with the central air passage 60 such that the fuel flow exits the central fuel discharging orifice 44 with a central mixing air flow therein. See particularly Figure 3 above.

With respect to claim 20, **Prociw** teaches that the nozzle head comprises a plurality of pieces, and wherein said plurality includes a body and a cap co-operating to at least partially define the common outlet passage.

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3. Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Prociw et al. (US 6,289,676).



Prociw teaches a gas turbine fuel nozzle head, comprising: a central fuel discharging orifice 50; a first annular array of air discharging orifices 54 surrounding the central fuel discharging orifice 50 and communicating with an air source; a common annular outlet passage communicating with the first annular array of air discharging orifices 54, the common annular outlet passage having a curved annular transitional surface extending smoothly to a substantially radial and annular surface relative to a central axis of the fuel nozzle head for directing a first

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portion of a mixing air flow (air coming out of orifices 54) substantially perpendicularly towards a fuel flow exiting the fuel discharging orifice 50; and a second annular array of air discharging orifices 56 surrounding the common annular outlet passage and communicating with the air source for directing a guiding air flow angularly towards a mixed fuel/air flow. See particularly Figures 1-3.

Allowable Subject Matter

4. Claims 3-8, 10, 11 and 16-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

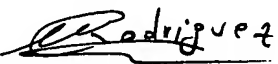
Contact information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Rodriguez whose telephone number is 571-272-4831. The examiner can normally be reached on Monday-Friday 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe can be reached on 571-272-4444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


William H. Rodriguez
Primary Examiner
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2/10/06